FIRST RECORD OF THE GENUS *ANABASIS* HEINRICH FROM CHINA, WITH DESCRIPTION OF A NEW SPECIES (LEPIDOPTERA: PYRALIDAE: PHYCITINAE)

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ABSTRACT: *Anabasis* Heinrich is reported for the first time from China. The type species of *Anabasis, A. ochrodesma* Heinrich, is from southeastern U.S. From China we describe a species new to science, *A. fusciflavida* sp. n., and transfer *A. infusella* (Meyrick, 1879) from *Copamyntis* Meyrick, a new distribution record for China. A key to Chinese species of *Anabasis* is provided. Adults and genitalia are illustrated.

KEY WORDS: Lepidoptera, Pyralidae, *Anabasis*, China, new species, new combination

Anabasis Heinrich (1956) was erected for the New World species *A. ochrodesma* Zeller that was thought to be closely related to *Acrobasis* Zeller (Heinrich, 1956, p. 25; Neunzig, 1986, p. 71). *Anabasis* was previously only known to occur in southeastern United States and, according to Neunzig (1986), the range of the type species, *A. ochrodesma* (Zeller), extends from southern Florida and South Carolina in the U.S.A. to northern South America. Up to now, *Anabasis* has remained monotypic and restricted to the New World.

In the present paper, this genus is recorded for the first time from China. We describe a new species, *A. fusciflavida,* and create one new combination, *A. infusella* (Meyrick), which is a new distribution record for China. Also, we provide a detailed redescription of *A. infusella* and illustrate its genitalia. Both *A. fusciflavida* and *A. infusella* are limited to southern China.

Anabasis is characterized by having forewings with an antemedial scale ridge, the base of M_2 and M_3 approximate for a very short distance, hindwings with basal half of M_2 and M_3 approximate or anastomosed (Fig. 1), and male genitalia with a transverse, sclerotized ridge from the terminal end of sacculus to the base of costa. *Anabasis* belongs in a group of genera, including *Acrobasis* Zeller, that share the presence of conspicuously enlarged and angulate male antennae (Heinrich, 1986).

Material of *A. ochrodesma* was not examined; illustrations in Heinrich (1956) and Neunzig (1986) were used for comparative purposes. The type of *A. infuselella* was not examined; its identity follows Roesler (1983), who presumably studied the type specimens deposited at The Natural History Museum (London), as

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well as illustrated the adults and genitalia. Types of *A. fusciflavida* and specimens examined of *A. infusella* are deposited in the Institute of Zoology, Chinese Academy of Sciences in Beijing.

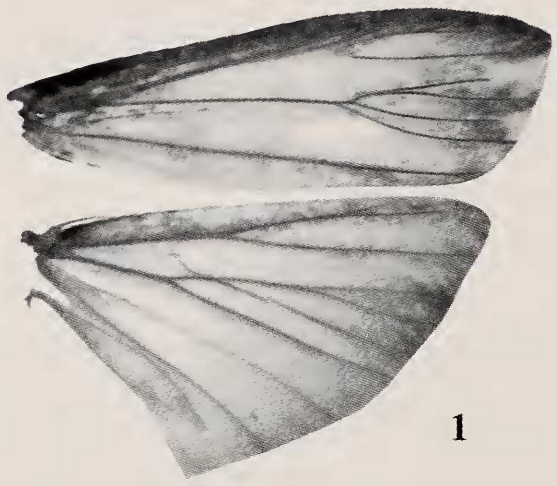


Fig.1. Venation of *A. infusella* (Meyrick).

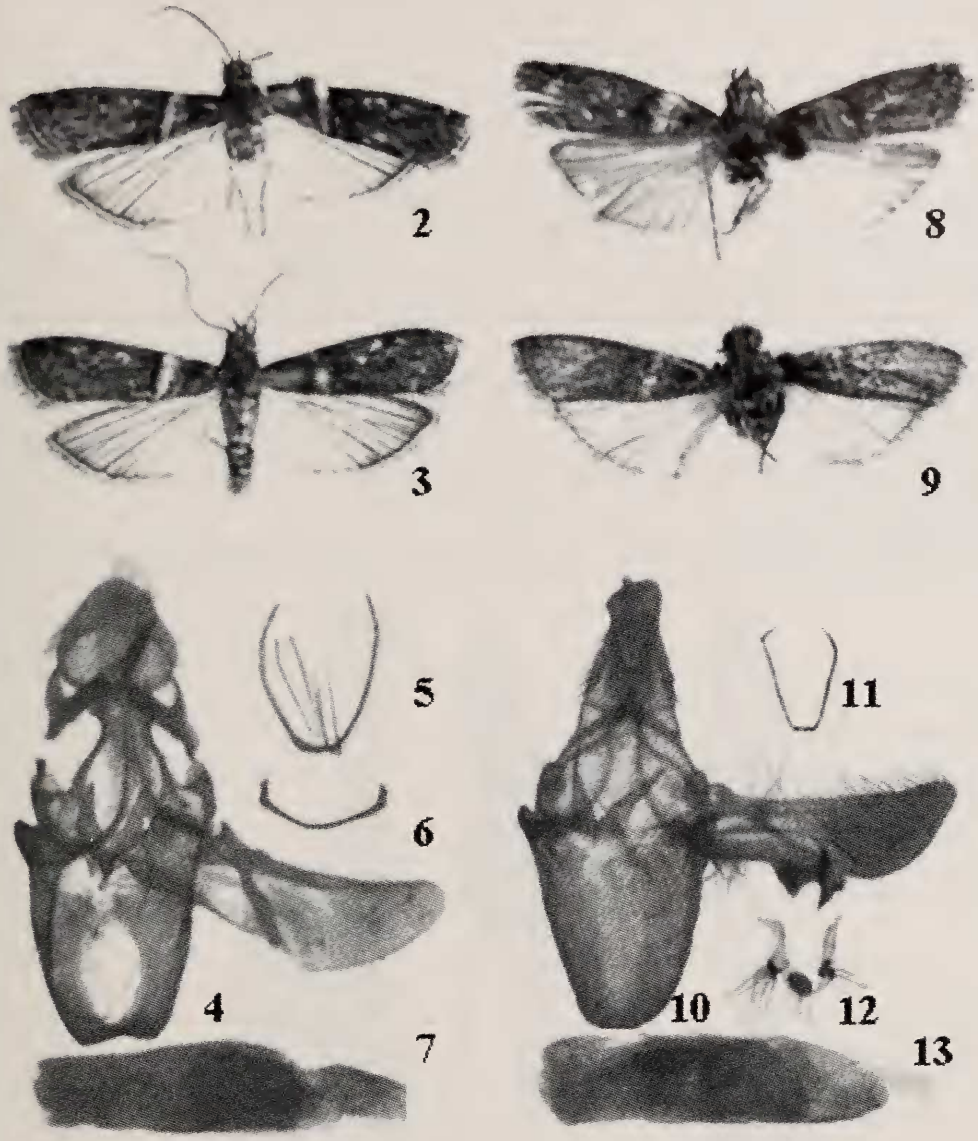
KEY TO THE SPECIES OF *ANABASIS* HEINRICH FROM CHINA

1. Forewing with inside of antemedial line bordered by one line, lateral arms of juxta shorter than gnathos, corpus bursa with two signa .....
.....*A. fusciflavida* sp. nov.

   Forewing with inside of antemedial line bordered by three narrow lines, lateral arms of juxta longer than gnathos, corpus bursa with one signum .....
.....*A. infusella* (Meyrick)

Anabasis fusciflavida Du, Song and Wu, NEW SPECIES
(Figs. 2-7, 14)

Diagnosis: This new species is very similar to the Nearctic *Anabasis ochrodesma* (Zeller), from which it can be distinguished by following characters: (1) forewing with underside gray, costa without blackish fuscous dot; (2) female genitalia with ductus bursae shorter than corpus bursae, ductus seminalis inserted at the anterior end of the corpus bursae. In *A. ochrodesma,* the ductus bursae is longer than the corpus bursae, and the ductus seminalis is inserted at the posterior end of corpus bursae.



Figs. 2-7. *Anabasis fusciflavida* sp. nov.; Figs. 8-13. *Anabasis infusella* (Meyrick). 2, 8. Male adults; 3, 9. Female adults; 4, 10. Male genitalia without aedeagus; 5, 11. Eighth sternites; 6, 12. Eighth tergites; 7, 13. Aedeagus.

Description (Figs. 2-3): Wingspan 15.5-19.0 mm. Vertex covered with blackish fuscous rough scales. Antennae of male with cilia significantly shorter than width of shaft, cilia of female shorter than male's. Labial palpus extended slightly above vertex, covered with white and black scales; male with the second segment 2 times length of the first, and 1.5 times of the third, whereas female with the second segment 2.5 times length of the first, and 1.2 times of the third. Both color and length of maxillary palpus same as that of the third segment of labial palpus. Forewing three times as long as wide, with ground color mouse gray; antemedial ridge straight, 1/4 away from the basal, consisting of raised black scales outside and yellowish scales inside; postmedial line zigzagged and whitish, both inside and outside bordered with narrow, blackish fuscous line; discal spots black, separate from each other. Hindwing translucent, with cilia white to gray.

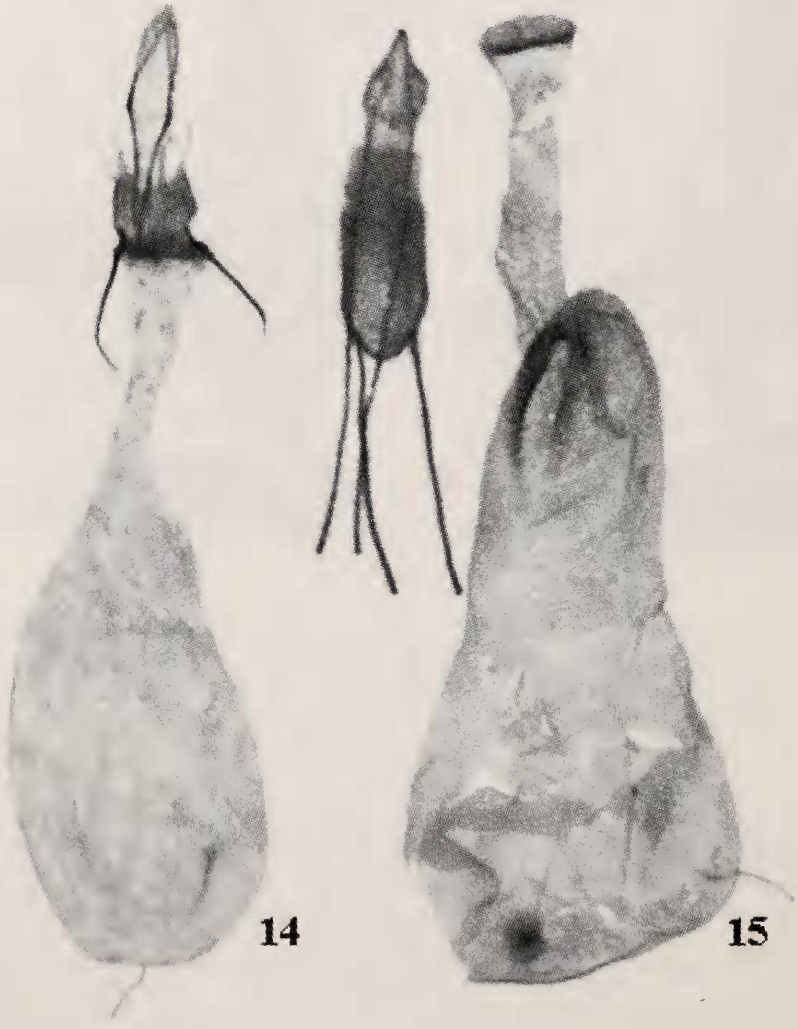
Male genitalia (Figs. 4-7). Uncus triangular, almost as long as wide. Gnathos 2/3 length of uncus, with base expanded and apex hooked. Transtilla with posterior margin slightly concave. Valva three times as long as wide, base with a digitiform clasper, which is connected with the transverse, sclerotized ridge; cucullus narrowly rounded; costa straight, sclerotization with basal 2/3rds broad and distal 1/3rd thin, not reaching apex of valva; sacculus with basal half wide and distal half thin, 0.6 times length of valva, underside of sacculus bordered with a line of setae. Juxta V-shaped, well sclerotized, with short setae on lateral arms. Vinculum U-shaped, as long as greatest width, with anterior margin somewhat concave. Aedeagus with one side concave. Eighth tergite and sternite U-shaped.

Female genitalia (Fig. 14). Ovipositor short. Anterior apophyses same length as posterior apophyses. Eighth tergite 2/3 times as long as wide. Ductus bursae membranous, short and thin. Corpus bursae membranous, pear-shaped, three times as long as ductus bursae and with micro-spines in posterior half, signum as a scobinate invaginated cup at anterior half of corpus bursae. Ductus seminalis inserted at anterior end of corpus bursae.

Holotype: male, Sichuan: Fengdu (610 m), 1994. X. 05, Shimei Song. **Paratypes:** 1♂, Hubei: Shennongjia (180 m), 1987. VIII. 04, Yinheng Han; 5♂♂, 17♀♀, same data as holotype; 1♂, 1♀, Sichuan: Emei (800-1000 m), 1957. IV. 27, Fuxing Zhu; 1♀, Sichuan: Wanxian (1200 m), 1994. IX. 27, Shimei Song; 1♀, Yunnan: Xishuangbanna (650 m), 1962. V. 19, Shimei Song; 1♀, Yunnan: Xishuangbanna (1200-1600 m), 1958. VII. 19, Shuyong Wang.

Distribution: China (Hubei, Sichuan, Yunnan).

Etymology: The specific name refers to the yellowish fuscous antemedial scale ridge.



Figs. 14-15. Female genitalia. 14. *Anabasis fusciflavida* sp. nov.; 15. *Anabasis infusella* (Meyrick).

Anabasis infusella (Meyrick, 1879) NEW COMBINATION
(Figs. 8-13, 15)

Nephopteryx infusella Meyrick, 1879: 218.
Copamyntis infusella (Meyrick, 1879): Roesler and Küppers, 1981: 40-41.

Diagnosis: A species with short wingspan, with obscure postmedial line and discal spots; valva with one group of setae, sacculus with one group of scales and two groups of setae; corpus bursae gourd-form, with two signa, one U-shaped, composed of toothlike spines and at the posterior end of corpus bursae, the other nipplelike, consisting of scobinations and at the anterior end of corpus bursae.

Redescription (Figs. 8-9): Wingspan 14.0-15.5 mm. Vertex with appressed fuscous scales. In male, labial palpus distinctly above vertex, but in female it hardly reaches vertex; both sexes with labial palpus fuscous, sprinkled with many white scales; the second segment 2 times length of the basal, and 1.5 times length of the terminal. Maxillary palpus short, about as long as the first segment of labial palpus. Forewing grayish fuscous, basal area yellowish fuscous; antemedial scale ridge arched, fuscous, preceded respectively by a narrow whitish line, a black fuscous thin line and a white thin line, followed by a narrow yellow line; postmedial line gray, indistinct, preceded by a black fuscous line and curved inwardly at vein R_2; discal spots indistinct. Hindwing yellowish gray, veins and margin yellowish fuscous.

Male genitalia (Figs. 10-13). Uncus as long as wide, apex rounded. Gnathos about half length of uncus, with base broad and tapered apically. Transtilla with posterior margin somewhat concave. Valva with greatest width medially, cucullus narrowly rounded; the transverse, sclerotized ridge connected with the knob-like clasper, terminal end near sacculus with one group of setae; sacculus narrow and long, curved ventrally as two protuberance at basal 1/3 and basal 2/3, and respectively with a group of scales and setae, terminal end curved ventrally as a hook and with a group of setae. Juxta with well sclerotized lateral arms and acute apices. Vinculum U-shaped, longer than greatest width, posterior margin slightly wider than anterior margin. Aedeagus cylindrical. Eighth tergite and sternite U-shaped.

Female genitalia (Fig. 15). Apophyses anterior and apophyses posterior both longer than those in other species of this genus, and the anterior apophyses at most 2/3 times length of the posterior apophyses. Ductus bursae short, only 1/3 times as long as corpus bursae, anterior half with micro-spines. Corpus bursae cucurbit-shaped, posterior half with micro-spines, with two signa, one U-shaped, composed of thorn-like spines, and at posterior end near junction with ductus bursae, the other nipple-like, composed of scobinations at anterior end of corpus bursae. Ductus seminalis inserted in middle of corpus bursa.

Material Examined: 8♂♂, 2♀♀, Guangdong: Guangzhou (50 m), 1958. VII.12 ~ IX.19, Linyao Wang and Baolin Zhang.

Distribution: China (Guangdong); Bhutan, Sikkim, India, Sri Lanka, Malaysia, Sumatra, Java, Australia (Queensland).

Remarks: *Anabasis* Heinrich seems to be closely related to *Copamyntis* Meyrick based on the enlarged angulate male antennae and the transverse sclerotized ridge on the valva in the male genitalia. *Anabasis* can be distinguished from the latter by the triangular scape of the male antenna, the sclerotized transtilla, and the approximated base of M_2 and M_3 on the forewing. In *Copamyntis,* the scape of the male antenna is expanded and trifurcate apically (Roesler, 1983, Tafel 19: Fig. 49), the transtilla is not sclerotized, and M_2 and M_3 of the forewing are stalked about half. Based on characters of the male antenna and venation, we concluded that *infusella* should not be placed in *Copamyntis,* and we transfer it to *Anabasis.* This species is reported for the first time in China.

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